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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:)
Henry Kozlowski	Examiner: Not yet known
for: Apparatus for ultraviolet light treatment of fluids) Group Art Unit: 1741))
Serial No.: 10/009,676))
Filed: December 12, 2001 I.A. Filing Date: June 4, 1999	,)) (Atty. Docket No. 6746-01WOUS)

Hartford, Connecticut, June 24, 2004

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

STATUS REQUEST

Dear Sirs:

On January 31, 2002 the filing receipt for the above-identified case was received. A Preliminary Amendment and Request for Interference under 37 CFR § 1.607 was mailed to the Patent Office on January 8, 2004. A copy of the Preliminary Amendment and Request for Interference, as well as the stamp-received postcard, are enclosed for your reference. By our records, there has been no further activity. Applicant, therefore, requests that a status report be provided for the above-identified patent application.

No fee is believed to be due by requesting the status of the above-identified application. If a deficiency in the amount is found, please charge deposit account No: 13-0235.

Respectfully submitted,

Donald J. MacDonald

Registration No: 42,823 Attorney for Applicant

McCormick, Paulding & Huber LLP CityPlace II, 185 Asylum Street Hartford, CT 06103 860-549-5290



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:)
Henry Kozlowski for: Apparatus for ultraviolet light treatment of fluids) Group Art Unit: Not yet known) Examiner: Not yet known)
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Filed: December 12, 2001 I.A. Filing Date: June 4, 1999)) (Atty. Docket No. 6746-01WOUS)

Hartford, Connecticut, January 8, 2004

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT AND REQUEST FOR INTERFERENCE UNDER 37 CFR § 1.607

Please amend the above-identified application as follows:

AMENDMENTS TO THE CLAIMS

1. (Original) A radiation source assembly for use with a fluid, comprising: at least one radiation source adapted to be immersed in said fluid when the assembly is in use, the source producing radiation by excitation of a gas;

at least one excitation controlling means for controlling excitation of the gas within the radiation source, said excitation controlling means being adapted to be immersed in said fluid when the assembly is in use;

an elongate frame member having a portion adapted to be immersed in the fluid when the assembly is in use, the frame member being connected to at least one of the radiation source and the excitation controlling means; and

electrical conducting means for providing electrical energy to the excitation controlling means.

- 2. (Original) A radiation source assembly according to Claim 1 wherein the radiation source has electrodes and the excitation controlling means is a ballast electrically connected to the radiation source.
- 3. (Original) A radiation source assembly according to Claim 2 wherein the radiation source is a lamp for emitting ultraviolet radiation.
- 4. (Original) A radiation source assembly for use with a material selected from the group consisting of a liquid and a flowing fluid, comprising:
- a) when the material is a liquid

at least one radiation source adapted to be immersed in said liquid when the assembly is in use;

at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said liquid when the assembly is in use;

and electrical conducting means for providing electrical energy to the excitation controlling means, or

b) when the material is a flowing fluid

at least one radiation source adapted to be immersed in said flowing fluid when the assembly is in use;

at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said flowing fluid when the assembly is in use;

and electrical conducting means for providing electrical energy to the excitation controlling means.

- 5. (Original) A radiation source assembly according to Claim 4 wherein the radiation source is an ultraviolet lamp and the excitation controlling means is a ballast.
- 6. (Original) A radiation source assembly according to Claim 5 in which the assembly has an elongate frame member having a portion adapted to be immersed in the liquid or flowing fluid when the assembly is in use, and the frame member is connected to at least one of a) the ultraviolet lamp, b) an ultraviolet-transparent sleeve for the ultraviolet lamp and c) the ballast.

- 7. (Original) A radiation source assembly according to Claim 6 wherein the lamp is an electrodeless lamp and the excitation controlling means is a high frequency coupler.
- 8. (Original) A radiation source assembly according to Claim 6 wherein the radiation source is an ultraviolet lamp with electrodes and the excitation controlling means is a ballast electrically connected to the lamp.
- 9. (Original) A radiation source assembly according to Claim 8 wherein the ultraviolet lamp is adjacent to the ballast.
- 10. (Original) A radiation source assembly according to Claim 9 wherein the ballast is supported by said elongate frame member.
- 11. (Original) A radiation source assembly according to Claim 10 wherein, when the material is a liquid, the ballast is elongate and has first and second opposed ends, the first end of which is mounted on a portion of the first elongate frame member which is to be immersed in the liquid, the lamp is elongate and has first and second opposed ends, the first end of which is connected to the second end of the ballast.
- 12. (Original) A radiation source assembly according to Claim 5 wherein the electrical conducting means includes, for each excitation controlling means, an electrical wire which extends from the excitation controlling means to a location which is not immersed in the liquid or flowing fluid.

- 13. (Original) A radiation source assembly according to Claim 11 wherein the assembly has a further elongate frame member, and the second end of each associated lamp is supported by said further elongate frame member.
- 14. (Original) A radiation source assembly according to Claim 11 wherein the first elongate frame member is tubular with an outer wall and wherein there is, for each ballast, a support with an externally threaded tubular stub surrounding an access aperture through the outer wall, the ballast having an external retaining ring fixed adjacent the first end thereof, the assembly further comprising an internally threaded coupling for engaging the stub and the retaining ring, so as to move the stub and the ring toward each other, and a resilient sealing member between the stub and the coupling such that the retaining ring is pressed against the exterior of the excitation controlling means when the coupling is tightened.
- 15. (Original) A radiation source assembly according to Claim 11 wherein the assembly has a sleeve surrounding each radiation source, said sleeve having one open end and one closed end and being made of a material transparent to radiation emitted by the radiation source, and a further coupling which sealingly supports the open end of said sleeve from the second end of the excitation controlling means.
- 16. (Original) A radiation source assembly for use in a photochemical treatment of a fluid comprising:
- at least one radiation source for producing radiation by excitation of a gas; at least one excitation controlling means adapted to be immersed in said fluid when the assembly is in use, for controlling excitation of the gas within the radiation source;

a submersible frame member having a portion adapted to be immersed in the fluid when the assembly is in use and having a plurality of supports, each support providing support for at least one of a) a radiation source, b) a radiation-transparent sleeve for the radiation source and c) an excitation controlling means; and

electrical conducting means for providing electrical energy to the excitation controlling means.

17. (Original) A radiation source assembly according to Claim 16 for treatment of a liquid wherein the assembly is selected from the group consisting of

A) an assembly in which the excitation controlling means is a ballast, said ballast having a second end opposed to a first end, and said ballast having an outer sleeve which encloses components of the ballast, the sleeve being sealed to prevent ingress of liquid into the ballast, said ballast and support having connection means for mechanically connecting the first end of the ballast to the support;

the radiation source is an elongate ultraviolet lamp having first and second opposed ends, said lamp and ballast having connection means for mechanically and electrically connecting the first end of the lamp to the second end of the ballast; and and the assembly has means for sealing the lamp against direct contact with

the liquid;

B) an assembly in which the radiation source is an elongate ultraviolet lamp having connection means for mechanically connecting the lamp to the support;

the excitation controlling means is a ballast, said lamp and ballast having means for electrically connecting them together; and

the assembly has sealing means for sealing the lamp and ballast against direct contact with the liquid;

C) an assembly in which the radiation source is an elongate ultraviolet lamp;

the excitation controlling means is a ballast, said lamp and ballast having means for electrically connecting them together;

and the assembly has a sleeve covering and sealing the lamp and ballast against direct contact with the liquid, and the assembly has connection means for mechanically connecting the sleeve means to the support; and

D) an assembly in which the excitation controlling means is a ballast, having an outer sleeve which encloses components of the ballast, the sleeve being sealed to prevent ingress of liquid into the ballast, said ballast having connection means for mechanically connecting the ballast to the support;

the radiation source is an elongate ultraviolet lamp having connection means for mechanically connecting the lamp to the support separately from the ballast, and means for sealing the lamp against direct contact with the liquid, said lamp and ballast having means for electrically connecting them together.

- 18. (Original) A radiation source assembly according to Claim 16 wherein the tubular elongate frame member contains electrical power transmission means and the ballast is removably coupled, electrically, to the power transmission means.
- 19. (Original) A radiation source assembly according to Claim 16 wherein each radiation source is an ultraviolet lamp, each excitation controlling means is a ballast, each lamp has an ultraviolet transparent sleeve and there is a screw coupling with a liquid tight seal between the lamp, sleeve and ballast.
- 20. (Original) A process for treating liquids with ultraviolet light comprising passing the liquid over an ultraviolet lamp and ballast assembly which is submerged in the liquid.

21. (Original) A means for transmission of electrical power and electrical signals, in form of a laminate which comprises:

a plurality of elongated electrically conducting members, each with a plurality of connectors at spaced apart intervals along the member, said electrically conducting members having an electrically insulating material between the members.

- 22. (Original) A means for transmission of electrical power and electrical signals according to Claim 21 wherein each electrically conducting member is sandwiched between two electrically insulating strips, and at least one of the strips has notches at spaced apart intervals along the strip, wherein the connectors are housed in the notches.
- 23. (Original) A means for transmission of electrical power and electrical signals according to Claim 21 which has first and second elongated electrically conducting members, said first electrically conducting member being sandwiched between first and second electrically insulating members and said second electrically conducting member being sandwiched between second and third electrically insulating members.
- 24. (Original) A means for transmission of electrical power and electrical signals according to Claim 21 wherein the connectors are spring clip connectors for connecting with electrically conducting pins.

- 25. (Original) A means for transmission of electrical power and electrical signals according to Claim 21 wherein each outer electrically insulating member is clad with a further electrically insulating member.
- 26. (New) A radiation source module comprising:
 - a frame having a first support member;
- at least one radiation source assembly extending from and in engagement with the first support member;
 - a radiation source disposed in the radiation source assembly;

connection means for affixing the radiation source module in a fluid treatment system; and

- a power supply connected to the frame and configured to be in contact with a fluid.
- 27. (New) The radiation source module defined in claim 26, wherein the fluid comprises fluid being treated.
- 28. (New) The radiation source module defined in claim 26, wherein the fluid comprises a cooling liquid.
- 29. (New) The radiation source module defined in claim 28, further comprising a container for the cooling liquid.
- 30. (New) The radiation source module defined in claim 29, wherein the container is remote from the module.

- 31. (New) The radiation source module defined in claim 29, wherein the container is attached to the module.
- 32. (New) The radiation source module defined in claim 31, wherein a portion of the container comprising the cooling liquid is submersible in the fluid being treated.
- 33. (New) The radiation source module defined in claim 26, wherein the power supply is configured to be fully submersible in a fluid being treated.
- 34. (New) The radiation source module defined in claim 26, wherein at least one radiation source assembly is cantilevered from the first support member.
- 35. (New) The radiation source module defined in claim 26, wherein the power supply is interposed between the support member and the radiation source.
- 36. (New) The radiation source module defined in claim 26, wherein an individual power supply is provided for each radiation source in the module.
- 37. (New) The radiation source module defined in claim 26, wherein an individual power supply is provided for each pair of radiation sources in the radiation source assembly.
- 38. (New) The radiation source module defined in claim 26, wherein an individual power supply is provided for a plurality of radiation sources in the radiation source assembly.

- 39. (New) The radiation source module defined in claim 26, wherein the power supply is connected to the connection means and a portion of the power supply is configured to be immersed in a fluid.
- 40. (New) The radiation source module defined in claim 26, wherein the frame comprises a second support member and the radiation source assembly is supported at its opposed ends by the first support member and the second support member.
- 41. (New) The radiation source module defined in claim 40, the frame comprises a third support member interconnecting the first support member and the second support member.
- 42. (New) The radiation source module defined in claim 26, wherein the power supply is disposed within a portion of the frame.
- 43. (New) The radiation source module defined in claim 26, wherein the power supply is connected to an exterior of the frame.
- 44. (New) A fluid treatment system comprising a radiation source module defined in claim 26.

45. (New) A radiation source module comprising:

a frame having a first support member;

treatment system; and

at least one radiation source assembly extending from and in engagement with the first support member;

a radiation source disposed in the radiation source assembly; connection means for affixing the radiation source module in a fluid

a power supply connected to the frame and configured to be in contact with a fluid, wherein a portion of the power supply is configured to contact a dielectric cooling liquid.

REMARKS

Claims 1-25 are pending in the application. By this amendment new claims 26-45 have been added to the application.

Applicant seeks to have an interference declared between the present application and U.S. Patent No. 6,507,028 issued January 14, 2003 to Sarchese et al. (herein referred to as "the '028 patent") and assigned to Trojan Technologies, Incorporated.

New claims 26-44 are directed to the same patentable invention as claims 1-19 of the '028 patent. New claim 26 is copied from, and corresponds substantially to claim 1 of the '028 patent. New claims 27-44 are copied from, and correspond exactly to claims 2-19 of the '028 patent. New claim 45 is copied from, and corresponds substantially to claim 21 of the '028 patent.

Pursuant to 37 CFR § 1.607(a) Applicant submits the following proposed count:

Count 1

A radiation source module comprising:

a frame having a first support member;

at least one radiation source assembly extending from and in engagement with the first support member;

a radiation source disposed in the radiation source assembly;

connection means for affixing the radiation source module in a fluid treatment system; and

a power supply connected to the frame and configured to be in contact with a fluid.

Claims 1-21 of the '028 patent correspond to the proposed count. Claims 1-6, 8-13 and 26-45 of the present application correspond to the proposed count.

In accordance with 37 CFR § 1.607(a)(5), Applicant has applied the terms of new claims 26-45 to the disclosure of the application as set forth in Appendix A attached hereto.

All of the claims presented herein are filed within one year after the issue date of the '028 patent.

The effective filing date of the present application is June 4, 1999 which is prior to the effective filing date of the '028 patent. Accordingly, applicant submits that new claims 26-45 are patentable to the applicant over the '028 patent and that an interference should be declared on the proposed count.

Should the Examiner have any questions regarding the present application, Applicants respectfully request that the Examiner contact Applicants' representative at the phone number listed below.

Applicant has enclosed a check in the amount of \$266 to cover the cost of two independent claims in excess of three and twenty additional claims. Applicant believes that no additional fees are due with filing this amendment, please charge any deficiencies in fees associated with this filing to our Deposit Account No: 13-0235.

Respectfully submitted,

Donald J/MacDonald

Registration No: 42,823 Attorney for Applicants

McCORMICK, PAULDING & HUBER LLP CityPlace II, 185 Asylum Street Hartford, CT 06103-3402 (860) 549-5290

APPENDIX A

Application of the terms of the claims of U.S. Patent No. 6,507,028 to the present application Serial No. 10/009,676 of H. Kozlowski.

Claim terms of U	J.S.	Pat.	No.	6.507.02	.8
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Claim 1. A radiation source module comprising:

a frame having a first support member;

at least one radiation source assembly extending from and in engagement with the first support member; a radiation source disposed in the radiation source assembly;

connection means for affixing the radiation source module in a fluid treatment system; and

a power supply connected to the frame and configured to be in contact with a fluid, said power supply being connected to said first support member on a side of said first support member which is opposite a side on which said radiation source assembly is connected.

Corresponding element in Application

"a radiation source assembly for use with a fluid, comprising:" (p. 2, ll. 19-20)

"a submersible frame member having a portion adapted to be immersed in the fluid when the assembly is in use and having a plurality of supports" (p. 5, ll. 28-29). See also FIGS. 1-6. "lamp rack 10 which has vertical conduit 11, a vertical support member 12 and a bar 13." (p. 9, ll. 21-22).

"each support providing support for at least one of a) a radiation source, b) a radiation-transparent sleeve for the radiation source and b) an excitation controlling means; and electrical conducting means for providing electrical energy to the excitation controlling means." (p. 5, l. 29 - p. 6, l. 2) See also FIGS. 1-6.

"a submersible frame member having a portion adapted to be immersed in the fluid when the assembly is in use" (p. 5, ll. 28-29). See also FIG. 1. "The present invention also provides an ultraviolet lamp assembly for submersion in a liquid, comprising a rack with a submersible conduit" (p. 7, ll. 19-20).

"at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said fluid when the assembly is in use;" (p. 2, ll. 23-25). See also FIGS. 1-6).

"In another embodiment, the ballast is supported by the first elongate frame member." (p. 4, ll. 9-10).

"Alternatively, the ballast may be physically separated from the lamp..." (p.12, ll. 29-30).

"It will be understood that other arrangements for securing the balat and

	lamps in place are possible without departing from the essence of the invention." (p. 10, ll. 23-24).
Claim 2. The radiation source module defined by claim 1, wherein the fluid comprises the fluid being treated.	See FIG. 1; "a radiation source assembly for use with a fluid, comprising:" (p. 2, ll. 19-20) "at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said fluid when the assembly is in use;" (p. 2, ll. 23-25). See also FIGS. 1-6. "The present invention is useful for the treatment of water, e.g. for waste water disinfection, drinking water disinfection, advanced oxidatioin treatment and other water treatment processes. The rack with attached ballasts and ultraviolet lamps preferably is immersed in the water so that a stream of water flows over the ultraviolet lamps One of the advantages of this aspect of the invention is that the water that is treated can be used to cool the ballasts." (p. 13, ll. 6-13).
Claim 3. The radiation source module defined in claim 1, wherein the fluid comprises a cooling liquid.	"The present invention is useful for the treatment of water, e.g. for waste water disinfection, drinking water disinfection, advanced oxidatioin treatment and other water treatment processes. The rack with attached ballasts and ultraviolet lamps preferably is immersed in the water so that a stream of water flows over the ultraviolet lamps One of the advantages of this aspect of the invention is that the water that is treated can be used to cool the ballasts." (p. 13, ll. 6-13). See also FIGS. 1 and 2.
Claim 4. The radiation source module defined in claim 3, further comprising a container for the cooling liquid.	"Ballast 16 has internal components 22 encased in sleeve 21." (p. 9, ll. 27-28). See also FIG. 2.
Claim 5. The radiation source module defined in claim 4, wherein the container is remote from the module.	"Alternatively, the ballast may be physically separated from the lamp" (p. 12, ll. 29-30).
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Claim 6. The radiation source module defined in claim 4, wherein the container is attached to the module.	See FIG. 2; "In another embodiment, the ballast is supported by the first elongate frame member." (p. 4, ll. 9-10).
Claim 7. The radiation source module defined in claim 6, wherein a portion of the container comprising the cooling liquid is submersible in the fluid being treated.	See FIG. 1; "The ultraviolet lamps 14 and ballasts 16 are submerged in liquid 66, e.g. waste water." (p. 9, ll. 27-28). "at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said liquid when the assembly is in use;" (p. 3, ll. 13-15).
Claim 8. The radiation source module defined in claim 1, wherein the power supply is configured to be fully submersible in a fluid being treated.	See FIG. 1; "The ultraviolet lamps 14 and ballasts 16 are submerged in liquid 66, e.g. waste water." (p. 9, ll. 27-28). "at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said liquid when the assembly is in use;" (p. 3, ll. 13-15).
Claim 9. The radiation source module defined in claim 1, wherein at least one radiation source assembly is cantilevered from the first support member.	See FIG. 5; "an asssembly in which the excitation control means is a ballast, said ballast having a second end opposed to a first end, and said ballast having an outer sleeve which encloses components of the ballast, said ballast and support having connection means for mechanically connecting the first end of the ballast to the support; the radiation source is an elongate ultraviolet lamp having first and second opposed ends, said lamp and ballast having connection means for mechanically and electrically connecting the first end of the lamp to the second end of the ballast;" (p. 6, ll. 5-12).
Claim 10. The radiation source module defined in claim 1, wherein the power supply is interposed between the support member and the radiation source.	See FIGS. 1 and 5; "an asssembly in which the excitation control means is a ballast, said ballast having a second end opposed to a first end, and said ballast having an outer

	sleeve which encloses components of the ballast, said ballast and support having connection means for mechanically connecting the first end of the ballast to the support; the radiation source is an elongate ultraviolet lamp having first and second opposed ends, said lamp and ballast having connection means for mechanically and electrically connecting the first end of the lamp to the second end of the ballast;" (p. 6, ll. 5-12).
Claim 11. The radiation source module defined in claim 1, wherein an individual power supply is provided for each radiation source in the module.	See FIGS. 1, 2 and 5; "In a further embodiment, the assembly has a plurality of excitation control means, each with a radiation source associated therewith." (p. 4, ll. 18-19).
Claim 12. The radiation source module defined in claim 1, wherein an individual power supply is provided for each pair of radiation sources in the radiation source assembly.	"In yet another embodiment, the assembly has a plurality of radiation sources connected to each excitation controlling means." (p. 4, ll. 20-21).
Claim 13. The radiation source module defined in claim 1, wherein an individual power supply is provided for a plurality of radiation sources in the radiation source assembly.	"In yet another embodiment, the assembly has a plurality of radiation sources connected to each excitation controlling means." (p. 4, ll. 20-21).
Claim 14. The radiation source module defined in claim 1, wherein the power supply is connected to the connection means and a portion of the power supply is configured to be immersed in a fluid.	See FIGS. 1 and 2; "at least one excitation control means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said fluid when the assembly is in use; a first elongate frame member having a portion adapted to be immersed in the fluid when the assembly is in use, the frame being connected to at least one of a) the radiation source and b) the excitation control means;" (p. 2, ll. 23-28).
Claim 15. The radiation source module defined in claim 1, wherein the frame comprises a second support member and the radiation source assembly is supported at its opposed ends by the	See FIGS. 1, 5 and 6; "In another embodiment, the assembly has a second elongate frame member, and when each ballast is supported by the first elongate frame member, the

first support member and the second support member.	second end of each associated lamp is supported by said second elongate frame member." (p. 4, ll. 27-29).
Claim 16. The radiation source module defined in claim 15, the frame comprises a third support member interconnecting the first support member and the second support member.	See FIG. 1; "Referring to Figure 1, there is an ultraviolet lamp rack 10 which has a vertical conduit 11, a vertical support member 12 and a bar 13." (p. 9, ll. 21-22).
Claim 17. The radiation source module defined in claim 1, wherein the power supply is disposed within a portion of the frame.	See FIGS. 2 and 5.
Claim 18. The radiation source module defined in claim 1, wherein the power supply is connected to an exterior of the frame.	See FIGS. 1, 2 and 6; "In another embodiment, the ballast is supported by the first elongate frame member." (p. 4, ll. 9-10).
Claim 19. A fluid treatment system comprising a radiation source module defined in claim 1.	See FIG. 1; "The present invention is useful for the treatment of water, e.g. for waste water disinfection, drinking water disinfection, advanced oxidatioin treatment and other water treatment processes. The rack with attached ballasts and ultraviolet lamps preferably is immersed in the water so that a stream of water flows over the ultraviolet lamps One of the advantages of this aspect of the invention is that the water that is treated can be used to cool the ballasts." (p. 13, ll. 6-13).
Claim 21. A radiation source module comprising:	"a radiation source assembly for use with a fluid, comprising:" (p. 2, ll. 19-20)
a frame having a first support member;	"a submersible frame member having a portion adapted to be immersed in the fluid when the assembly is in use and having a plurality of supports" (p. 5, ll. 28-29). See also FIGS. 1-6. "lamp rack 10 which has vertical conduit 11, a vertical support member 12 and a bar 13." (p. 9, ll. 21-22).
at least one radiation source assembly extending from and in engagement with the first support	"each support providing support for at least one of a) a radiation source, b) a radiation-transparent sleeve for the

member; a radiation source disposed in the radiation source assembly;

connection means for affixing the radiation source module in a fluid treatment system; and

a power supply connected to the frame and configured to be in contact with a fluid, wherein the power supply is connected to the connection means and a portion of the power supply is configured to contact a dielectric cooling liquid.

radiation source and b) an excitation controlling means; and electrical conducting means for providing electrical energy to the excitation controlling means." (p. 5, l. 29 - p. 6, l. 2) See also FIGS. 1-6.

"a submersible frame member having a portion adapted to be immersed in the fluid when the assembly is in use" (p. 5, ll. 28-29). See also FIG. 1. "The present invention also provides an ultraviolet lamp assembly for submersion in a liquid, comprising a rack with a submersible conduit" (p. 7, ll. 19-20).

"at least one excitation controlling means for controlling excitation of gas within the radiation source, said excitation controlling means being adapted to be immersed in said fluid when the assembly is in use;" (p. 2, ll. 23-25). See also FIGS. 1-6).

"In another embodiment, the ballast is supported by the first elongate frame member." (p. 4, ll. 9-10).

"Alternatively, the ballast may be physically separated from the lamp..." (p.12, ll. 29-30).

"It will be understood that other arrangements for securing the balat and lamps in place are possible without departing from the essence of the invention." (p. 10, ll. 23-24).

"Ballast 16 has internal components 22 encased in sleeve 21." (p. 9, ll. 27-28). See also FIG. 2.